

1. (Currently Amended) A method ~~Method~~ for detecting partial conductor short circuits (7) in a conductor (11) including plural mutually insulated partial conductors, (5) ~~in which the method comprising:~~
connecting together the partial conductors (5) ~~are connected together by a short circuit (3) at one or both ends of the conductor (11), wherein;~~
measuring the propagation behavior of time-varying electrical signals ~~is measured on the conductor to be investigated,;~~
comparing the measured propagation behavior ~~is compared with the propagation behavior of a reference conductor without partial conductor short circuits,;~~ and
conclusions are drawn as to determining the presence of partial conductor short circuits from the changes in propagation behavior ~~given by the comparison from said comparing.~~
2. (Currently Amended) A method ~~Method~~ according to claim 1, wherein measuring the propagation behavior comprises measuring the a complex reflection ~~behavior is measured as the propagation behavior.~~
3. (Currently Amended) A method ~~Method~~ according to claim 2, wherein measuring comprises measuring the propagation behavior of periodic, particularly sinusoidal, signals of a predetermined frequency ~~are used as the signals changing with time, and in that wherein the frequency is varied in a predetermined frequency range for measuring the reflection behavior,;~~ and
comparing comprises receiving and comparing electrical parameters of the signals ~~returning from the conductor (11) are received and are evaluated as regards their electrical parameters, particularly their amplitude.~~
4. (Currently Amended) A method ~~Method~~ according to claim 3, wherein the frequency is varied in the range of a few kHz to a few 100 MHz, ~~in particular in the range of about 100 kHz to about 200 MHz.~~
5. (Currently Amended) A method ~~Method~~ according to claim 2, wherein as

the time-varying signals, comprise periodic or non-periodic signals of a predetermined signal form, particularly with rectangular or triangular form, are used, and wherein the further comprising receiving and evaluating signals coming back from the conductor (11) are received and are evaluated regarding their electrical parameters, particularly signal form of said signals.

6. (Currently Amended) A method Method according to ~~one of claims 1-5~~ Claim 1, wherein comprising:

feeding the time-varying electrical signals are fed into an end of the conductor (11) provided with a short circuit (3);

wherein an auxiliary conductor (4) is arranged parallel to the conductor (11) at a distance, and wherein comprising receiving and evaluating the signals returning via the auxiliary conductor (4) are received and evaluated.

7. (Currently Amended) A device Device useful for performing the method according to ~~claim 1~~ detecting partial conductor short circuits, wherein the comprising:

a retaining device;

a conductor (11) to be measured or the reference conductor, and an auxiliary conductor (4) are arranged in parallel and at a fixed distance to each other in a the retaining device (9);

a signal source;

a measuring device;

an input lead; and

a return lead;

wherein the conductor (11) or reference conductor is connected by at one end by means of an via the input lead (2) to a the signal source (1); and

wherein the auxiliary conductor (4) is connected via a the return lead (6) to a the measuring device.

8. (Currently Amended) A device Device according to claim 7, further comprising a network analyzer, and wherein the signal source (1) and the measuring

device are part of a the network analyzer.

9. (Currently Amended) A device ~~Device~~ according to ~~one of claims~~ Claim 7 or 8, where further comprising:

_____ a signal separating filter (8) for matching the signal amplitudes of the fed-in and received signals is inserted between the input lead (2) to the conductor (11) and the return lead (6) from the auxiliary conductor (4).

10. (Currently Amended) A device ~~Device~~ according to ~~one of claims 7-9~~ Claim 7, where in wherein the auxiliary conductor (4) is comprises an insulated copper conductor.

11. (Currently Amended) The Use of the method according to claim 1, on wherein said conductor comprises a Roebel bar from the stator of an electrical machine.

12. (Currently Amended) The Use of the method according to claim 1, on a wherein the conductor (11) in which the comprises partial conductors (5) which are electrically separated from one another at both ends of the said conductor (11), wherein before the detection measurement and further comprising forming a short circuit (3) is brought about at at least one of the two ends of said conductor before said measuring, and the detection measurement is then performed.

13. (New) A method according to Claim 3, wherein comparing comprises comparing electrical amplitude of the signals returning from the conductor.

14. (New) A method according to Claim 3, wherein said periodic signals comprise sinusoidal signals.

15. (New) A method according to Claim 4, wherein the frequency is varied in the range of about 100 kHz to about 200 MHz.

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16. (New) A method according to Claim 5, wherein said predetermined signal form comprises rectangular or triangular signal forms.
17. (New) A method in accordance with Claim 5, wherein said electrical parameters comprise signal form.
18. (New) A device according to Claim 7, wherein the conductor comprises a conductor to be measured or a reference conductor.